

Attorney Docket No.: DRE-0063
Inventors: Basude et al.
Serial No.: 09/980,134
Filing Date: July 2, 2002
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REMARKS

Claims 1-14 are pending in the instant application. Claims 1-14 have been rejected. Claim 1 and 10 have been amended. No new matter is added by these amendments. Reconsideration is respectfully requested in light of these amendments and the following remarks.

I. Rejection of Claims 1-7 and 9-14 under 35 U.S.C. § 102(b)

The rejection of claims 1-7 and 10-14 under 35 U.S.C. § 102(b) as being anticipated by Rasor (U.S. Patent 5,141,738) was maintained.

The rejection of claims 1-7 and 9-14 under 35 U.S.C. § 102(b) as being anticipated by Schneider (U.S. Patent 5,271,928) has also been maintained.

Applicants respectfully traverse these rejections.

The imaging contrast agents of Rasor et al. and Schneider et al. each require as an essential component a surfactant.

In contrast, the microbubbles of the instant invention were prepared without use of a surfactant.

In an earnest effort to make this distinction clear, Applicants have amended claim 1 to be drawn to a surface stabilized microbubble consisting essentially of a microparticle having a hydrophobic surface or an affinity for a specific gas and a gas microbubble which attaches to or encapsulates the microparticle. Applicants have also

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amended claim 10 to clarify that the ecogenic surface consists essentially of a coating with a hydrophobic surface or a surface with an affinity for a specific gas and gas bubbles which attach to or encapsulate the object to be ultrasonically detected. In accordance with MPEP 2111.03, the transitional phrase "consisting essentially of" limits the scope of the instant claims to the specified materials or steps and those that do not affect the basic and novel characteristics of the claimed invention. Novelty of the instant invention is based in part on the fact that the surface stabilized microbubbles of the present invention were made without a surfactant. This is made clear by the Background Section which distinguishes from the instant invention a number of prior art references relating to surfactant stabilized bubbles as well as experiments described at pages 7-8 and page 11 of the specification wherein the microbubbles of the instant invention were compared to those prepared with a surfactant. This amendment also clearly distinguishes the present invention from prior art teachings of Rasor et al. and Schneider et al. which require as an essential component a surfactant.

Withdrawal of these rejections under 35 U.S.C. 102(b) is therefore respectfully requested.

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II. Rejection of Claim 8 under 35 U.S.C. § 103(a)

The rejection of claim 8 as being unpatentable under 35 U.S.C. 103(a) over Razor (U.S. Patent 5,141,738) or Schneider (U.S. Patent 5,271,928) in view of Unger (U.S. Patent 5,542,935) has been maintained.

Applicants respectfully traverse this rejection.

As discussed in Section I, claim 1 from which claim 8 ultimately depends has been amended to be drawn to a surface stabilized microbubble consisting essentially of a microparticle having a hydrophobic surface or an affinity for a specific gas and a gas microbubble which attaches to or encapsulates the microparticle. This amendment clearly distinguishes the present invention from prior art teachings of Razor et al. and Schneider which require as an essential component a surfactant.

The secondary reference of Unger fails to remedy the deficiencies in teachings of either Razor et al. or Schneider et al. as this reference also fails to teach or suggest a surface stabilized microbubble produced without a surfactant.

Thus, in accordance with MPEP 2143.03, since independent claim 1 is nonobvious under 35 U.S.C. 103, then claim 8 depending therefrom is also nonobvious.

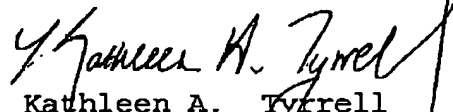
Withdrawal of this rejection is therefore respectfully requested.

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III. Conclusion

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,


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